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**STATE OF MARYLAND  
CRITICAL AREA COMMISSION  
CHESAPEAKE AND ATLANTIC COASTAL BAYS**

1804 West Street, Suite 100, Annapolis, Maryland 21401  
(410) 260-3460 Fax: (410) 974-5338  
[www.dnr.state.md.us/criticalarea/](http://www.dnr.state.md.us/criticalarea/)

March 5, 2008

Mr. Duncan Stewart  
City of Baltimore Planning Commission  
Department of Planning  
417 E. Fayette Street, 8<sup>th</sup> Floor  
Baltimore, Maryland 21202-3416

Re: Swan Park Renovation  
Environmental Remediation and Rebuilding of Ballfields  
Consistency Report

Dear Mr. Stewart:

Thank you for forwarding the above-referenced project to this office per the requirements of COMAR 27.02.02 - State and Local Agency Actions Resulting in Development of Local Significance on Private Lands or Lands Owned by Local Jurisdictions. The project involves environmental remediation of an existing park by covering it with two feet of soil, and rebuilding the ballfields for recreation purposes.

After reviewing the consistency report this office agrees that the project is consistent with the Baltimore City Critical Area Program provided an off-site planting location is found, and for the reasons outlined below.

- The proposed improvements do not change the use of the site prior to the remediation project.
- No more than 50% of the total Buffer area will be developed and these impacts will be mitigated through the payment the Buffer offset fee.
- All proposed clearing inside and outside the Buffer will be mitigated at an off-site location.
- Although the 10% stormwater calculation generated a negative removal requirement, the City will install two grass swales to meet MDE's stormwater requirements.

TTY for the Deaf  
Annapolis: (410) 974-2609 D.C. Metro: (301) 586-0450

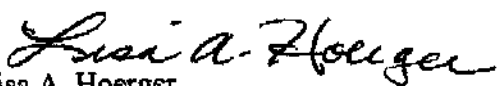
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Mr. Stewart  
March 5, 2008  
Page Two

The off-site planting location to accommodate 70,974 square feet (1.63 acres) should be identified and approved by the relevant City agencies and Commission staff prior to completion of the project. Please provide Commission staff with the status of the off-site planting as soon as it becomes available.

Thank you for the opportunity to comment. Please telephone me at (410) 260-3478 if you have any questions.

Sincerely,

  
Lisa A. Hoerger  
Regional Program Chief

cc: BA 94-08



# Rummel, Klepper & Kahl, LLP

William K. Hellmann  
Emeritus

David W. Wallace  
Robert J. Halbert  
Stephen G. Zentz  
J. Michael Potter  
Thomas E. Mohler  
James A. Zito

Charles M. Easter, Jr.  
Joseph A. Romanowski, Jr.  
Michael L. Krupsaw  
Lars E. Hill  
J. Tommy Peacock, Jr.  
Michael W. Myers  
Martin C. Rodgers  
Kenneth A. Goon  
Richard J. Adams, Jr.  
John A. d'Epagnier  
Barbara J. Hoage  
Christopher F. Wright  
Owen L. Peery  
Nancy R. Bergeron  
Stuart A. Montgomery  
David G. Vanscoy  
Henry J. Bankard, Jr.  
James F. Ridenour, Jr.  
Robert J. Andryszak  
Raymond M. Harbeson, Jr.  
B. Keith Skinner  
Karen B. Kahl  
Seyed A. Saadat  
John C. Moore  
Eric M. Klein  
Todd E. Rousenberger  
Donald P. Lauzon  
Thomas M. Heil  
Robert D. Ostermiller  
Barry L. Brandt  
Malachi Mills

3512 Concord Road  
York, PA 17402  
Ph: 717-600-2220  
Fax: 717-600-2421  
[www.rkk.com](http://www.rkk.com)

January 23, 2008

City of Baltimore  
Department of Planning  
417 E. Fayette St, 8<sup>th</sup> Fl.  
Baltimore, MD 21202

ATTN: Mr. Duncan Stuart  
Environmental Planner

RE: Swann Park Renovation  
Critical Area Letter of Explanation  
RK&K Comm. No. 107076-01

Mr. Stuart:

On behalf of our Client, Baltimore City Department of Recreation and Parks (DRP), we hereby submit the Swann Park Renovation project for Critical Area review and approval. Our submission is comprised of the following:

1. Letter of Explanation, (2) copies.
2. Worksheet A of the Applicant's Guide for 10% Rule Compliance
3. Critical Area Plan, (2) copies.

Swann Park is located in the shadow of I-95, at the end of West McComas Street. The 10.86 acre property is currently closed off to the public due to discovery of arsenic contamination. Prior to shut-down, the park provided various ball-fields for general public and City-School use. Through the combined efforts of Honeywell (former property owner) and DRP, and under mandates from MDE, the park will be cleaned up and rebuilt. Honeywell will provide arsenic remediation in the form of a soil cap. DRP will provide recreational improvements, including softball, baseball and football fields, walking paths, restroom facilities and associated amenities.

Chesapeake Bay Critical Area requirements shall be met as follows:

- Pollutant Removal – Impervious cover increases from 1% (0.10 ac) in existing conditions to 10% (1.11 ac) in proposed/future conditions. As shown on the attached Worksheet A, the post-development pollutant load is 1.17 lbs P/yr less than the pre-development load. Thus, the site impervious quantities proposed are minimal and do not generate a pollutant removal requirement. (Of note, two grass swales have been designed to provide MDE-required stormwater management for 75% of the proposed impervious pavement. However, the swales were not accounted for in the CAC-required pollutant removal calculations)
- Buffer Offset Fee – Baseball fields exist within the 100 ft Critical Area Buffer at Swann Park. In order to accommodate the development program for the park, ball fields must continue to be located in the Buffer. Per mandate from MDE, no woody vegetation will be permitted on-site because the roots might compromise the soil cap. MDE is also requiring the shoreline portion of the soil cap be protected from the erosive forces of wave action during large storms. Thus, the post-development buffer will be comprised of lawn cover, an asphalt walk and rip-rap shoreline protection. The buffer offset fee, \$2.50 per sf, when applied to the proposed 7,659 sf of non-vegetated Buffer is **\$19,148**.
- Forest Clearing Mitigation – The entire site must be disturbed to install the 24-inch soil cap. The disturbance results in 4,000 sf of clearing inside the Buffer and 9,200 sf outside the Buffer. At 3:1 and 1:1 ratios respectively, forest clearing



## Rummel, Klepper & Kahl, LLP

mitigation totaling **21,200 sf** is required.

- Afforestation – Critical Area regulations require a minimum forest cover at the proposed site equaling 15% of the total site area. Thus, the 10.86 acre site generates an afforestation requirement of 70,974 sf. After subtracting out the 21,200 sf already required for forest clearing mitigation, the net afforestation planting required is **49,774 sf**.
- Offsite Planting – As discussed under “Buffer Offset Fee”, MDE will not permit woody vegetation at the proposed site. Therefore, the Department of Recreation and Parks (DRP) will provide the entire planting requirement, **70,974 sf**, off-site. DRP will work with the Baltimore City Planning Department to determine the location. Upon determination, a planting plan will be prepared and submitted to the Planning Department for approval.

Please provide Critical Area approval for the Swann Park Renovation project. If you have any questions concerning the above, please do not hesitate to contact me.

Sincerely,

**Rummel, Klepper & Kahl, LLP**

*Robert A. Filippi*

Robert A. Filippi, RLA  
Senior Landscape Architect

cc. Joe Kostow, Baltimore City DPW  
Gennady Schwartz, Baltimore City DRP

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Project: **Swann Park**

Engineer: **Rummel, Klepper & Kahl, LLP**

Category: **Proposed Work + Future Work**

Date: **Jan. 23, 3008**

By: **raf**

## **Worksheet A: Standard Application Process**

### **Calculating Pollutant Removal Requirements\***

#### **Step 1: Calculating Existing and Proposed Site Imperviousness**

##### **A. Calculate Percent Imperviousness**

- 1) Site Acreage (A) = 10.86 acres
- 2) Site Imperviousness, existing and proposed, (See Table 1.0 for details)

	(a) Existing (acres)	(b) Post-Development (acres)
Rooftop		0.05
Roads	0.04	
Sidewalks	0.01	0.94
Parking Lots		
Pools / Ponds		
Future paving		0.12
Other: gravel drive	0.05	
Impervious Surface Area	0.10	1.11

Imperviousness (I)

Existing Impervious Surface Area / Site Area = (Step 2a) / (Step 1) = 1%

Post-Development Impervious Surface Area / Site Area = (Step 2b) / (Step 1) = 10%

##### **B. Define Development Category (circle)**

- 1) Redevelopment: Existing imperviousness greater than 15% | (Go to Step 2A)
- 2) New development: Existing imperviousness less than 15% | (Go to Step 2B)
- 3) Single Lot Residential: Single lot being developed or improved; single family residential development; and more than 250 square feet of impervious area and associated disturbance. (Go to Section 5, Residential Approach, for detailed criteria and requirements)

\* NOTE: All acreage used in this worksheet refers to areas within the IDA of the critical area only.

## Step 2: Calculate the Pre-Development Load ( $L_{pre}$ )

### A. Redevelopment

$$\begin{aligned} L_{pre} &= (R_v)(C)(A)8.16 \\ R_v &= 0.05 + 0.009(I_{pre}) & R_v &= \\ L_{pre} &= \\ &= \underline{\hspace{2cm}} \text{ lbs P / year} \end{aligned}$$

where:

$$\begin{aligned} L_{pre} &= \text{Average annual load of total phosphorous exported from the site prior to development (lbs/yr)} \\ R_v &= \text{Runoff coefficient, which expresses the fraction of rainfall which is converted into runoff} \\ I_{pre} &= \text{Pre-development Site imperviousness (I.e., I=75 if site is 75\% impervious)} \\ C &= \text{Flow weighted mean concentration of the pollutant in urban runoff (mg/l)} = 0.30 \\ A &= \text{Area of the development site (acres in the Critical Area)} \\ 8.16 &= \text{Includes regional constants and unit conversion factors} \end{aligned}$$

OR

### B. New Development

$$\begin{aligned} L_{pre} &= 0.5 \text{ lbs/year} * A \\ &= (0.5)(10.86) \\ &= \underline{5.43} \text{ lbs/yr P} \end{aligned}$$

## Step 3: Calculate the Post-Development Load ( $L_{post}$ )

### A. New Development and Redevelopment

$$\begin{aligned} L_{post} &= (R_v)(C)(A)8.16 \\ R_v &= 0.05 + 0.009(I_{post}) & R_v &= 0.1400 \\ L_{post} &= (0.14)(0.3)(10.86)8.16 \\ &= \underline{3.72} \text{ lbs P / year} \end{aligned}$$

where:

$$\begin{aligned} L_{post} &= \text{Average annual load of phosphorous exported from the post-development site (lbs./yr)} \\ R_v &= \text{Runoff coefficient, which expresses the fraction of rainfall which is converted into runoff} \\ I_{post} &= \text{Site imperviousness (I.e., I=75 if site is 75\% impervious)} \\ C &= \text{Flow weighted mean concentration of the pollutant in urban runoff (mg/l)} = 0.30 \\ A &= \text{Area of the development site (acres in the Critical Area)} \\ 8.16 &= \text{Includes regional constants and unit conversion factors} \end{aligned}$$

## Step 4: Calculate the Pollutant Removal Requirement (RR)

$$\begin{aligned}
 RR &= L_{\text{post}} - (0.9)(L_{\text{pre}}) \\
 &= (3.72) - (0.9)(5.43) \\
 &= \underline{-1.17} \text{ lbs/yr P}
 \end{aligned}$$

## Step 5: Identify Feasible Urban BMP

Select BMP Options using the screening matrices provided in the Chapter 4 of the 2000 Maryland Stormwater Design Manual. Calculate the load removed for each option.

BMP Type	(BMP <sub>RE</sub> )	x	(% DA Served)	x	(L <sub>post</sub> )	=	LR
_____	_____		_____	x	_____	=	_____ lbs/yr
_____	_____	x	_____	x	_____	=	_____ lbs/yr
_____	_____	x	_____	x	_____	=	_____ lbs/yr
_____	_____	x	_____	x	_____	=	_____ lbs/yr
Total Load Removed						=	_____ lbs/yr
Pollutant Removal Requirement, RR (from Step 4)						=	<u>-1.17</u> lbs/yr

where:

LR	=	Annual total phosphorous load removed by the proposed BMP (lbs/yr)
L <sub>post</sub>	=	Average annual load of phosphorous exported from the post-development site (lbs./yr)
BMP <sub>RE</sub>	=	BMP removal efficiency for total phosphorous, Table 4.8 (%)
% DA Served	=	Fraction of the site area within the critical area IDA served by the BMP (%)
RR	=	Pollutant removal requirement (lbs/yr)

If the Load Removed is equal to or greater than the pollutant removal requirement (RR) calculated in Step 4, then the on-site BMP option complies with the 10% Rule.

Has the RR (pollutant removal requirement) been met?

Yes

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